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001/011

AUG 26 2005

Docket No.: 1519-030

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

: ATTN: MAIL STOP ISSUE FEE

Paul Clifford REID

: Confirmation No. 1575

U.S. Patent Application No. 10/044,721

: Group Art Unit: 2116

Filed: January 14, 2002

: Allowed: January 5, 2005

: Examiner: John R. Cottingham

For: FENCE SUPPORT

RESPONSE TO
NOTICE OF DRAWING INCONSISTENCY WITH SPECIFICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

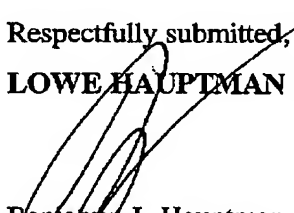
Sir:

Attached hereto are copies of the March 6, 2003 Amendment and date-stamped post card, providing the amendments made to the specification to reference new Figure 4. See the marked-up copy of page 7 attached to the March 6, 2003 Amendment.

In accordance with the above, it is respectfully requested that the previously forwarded Notice of Drawing Inconsistency with Specification be withdrawn and the attached amendments be entered accordingly.

If the attached is not a sufficient response to the Drawing Notice, it is respectfully requested that the undersigned be contacted *immediately*.

Respectfully submitted,
LOWE HAUPTMAN & BERNER, LLP


Benjamin J. Hauptman
Registration No. 29,310

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Date: August 26, 2005

CERTIFICATION OF FACSIMILE TRANSMISSION
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August 26, 2005
DATE

703-746-4000
FACSIMILE NUMBER

BEST AVAILABLE COPY

In re Patent Application of:

PAUL CLIFFORD REID

Serial No. 10/044,721, Filed: January 14, 2002

Title: FENCE SUPPORT

This acknowledges receipt by the USPTO of:

Check No. 9703 for \$465.00 and Check No. 9704 for \$9.00 covering:

☒ AMENDMENT UNDER RULE 115

☒ PETITION FOR EXTENSION OF TIME (3 Months)

This 6th day of March, 2003.

Docket No. 4059/12



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AUG 26 2005

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

PAUL CLIFFORD REID

Serial No.: 10/044,721

Filed: January 14, 2002

For: FENCE SUPPORT

Group Art Unit: 3679

Examiner: John R. Cottingham

AMENDMENT UNDER RULE 115

To the Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

In response to the Official Action of September 6, 2002, please amend the above-identified Application as follows:

IN THE SPECIFICATION (SUBSTITUTE SPECIFICATION):

Substitute a new page 7 submitted herewith for the prior page 7 of the Substitute Specification. A marked-up copying showing the amendments is also submitted herewith.

Page 8, insert the following new paragraph between lines 21 and 22: --The term "sleeve" as used in the claims refers to a structure that is open at both ends and does not include a cap, as such.--

4059/12

IN THE CLAIMS:

Please cancel without prejudice Claims 19, 20, 47 and 48 and add the following claims:

Claim 49. A fence support in accordance with Claim 18, wherein said lengths of material to be supported are electrified.

Claim 50. A fence support in accordance with Claim 18, wherein said sleeve for fitting over said support member is composed of an insulating material.

Claim 51. A method of constructing a fence post for an electrified fence which comprises rigidly installing a fence post in a vertical disposition at a site for an electrified fence, frictionally forcing a sleeve over substantially the entire exposed surface of said post, said sleeve having an external vertical web which has an opening for receiving an electrified wire, said sleeve being comprised of a dielectric material at least where it supports said electrified wire, and providing a cap which is separate from said sleeve to cover the top of said post.

Claim 52. A structure for an electrified fence which comprises a sleeve that receives and substantially surrounds the entire exposed surface of a post which extends vertically from the underlying surface at the site of the electrified fence, the interior of said sleeve comprising friction means for frictionally and forcibly receiving the post, said sleeve including an exterior web which is disposed parallel to the post with said sleeve installed over said post, said web having an opening for receiving an electrified wire of the fence, said sleeve being composed of dielectric material at least where it receives the electrified wire, and a cap which is separate from said sleeve covering the top of the post with said sleeve is installed over the post.

Claim 53. A fence support in accordance with Claim 18, wherein said sleeve is sufficiently long for fitting over substantially the entire exposed surface of said support member.

REMARKS

In the Official Action dated September 9, 2002, it was indicated that Claims 1, 2, 10 and 18-48 are pending in the Application. Method Claims 1, 2 and 33-47 were withdrawn from consideration and Claims 10, 18-32 and 48 were rejected. By this Amendment, Claims 19 and 20 have been cancelled without prejudice and, in effect, replaced by Claims 49 and 50. Claims 47 and 48 have also been cancelled and replaced, in effect, by Claims 51 and 52. Dependent Claim 53 has been added. A new Figure 4 is submitted herewith which illustrates in red an embodiment of the invention with a promotional display indicated thereon. Reference to new Figure 4 is also set forth by amendment in the Specification (Substitute Specification). In addition a next to last paragraph has been inserted on page 8 at the end of the Specification, on page 8 that states --The term "sleeve" as used in the claims refers to a structure that is open at both ends and does not include a cap, as such.--

The invention is directed to sleeves composed of insulating material which are received by posts that are usually made of steel for the purpose of supporting wires of an electrified fence, although they may also be used to support wires which are not electrified. The sleeves fit over the entire length of the posts extending above the surface at the site and thus not only support the fence, as such, but also protect the posts from rust and corrosion. Separate caps are also provided which fit over the tops of the sleeves which can be used for pounding the sleeves onto the post and preventing water or other corrosive materials from entering the space between the sleeves and the posts on which they are mounted. The sleeves have webs which have openings for receiving the wires which form the fence. The sleeves are preferably extruded and thus relatively inexpensive to produce and also may be cut to appropriate lengths so that they protect the entire fence post above ground from rust or corrosion. Thus the fence post according to the

invention provides not only a connection for an electrified fence or other type of fence made up of wires, but also provides protection for the post over which it is fitted. Another advantage is that the webs may receive a plurality of wires which not only makes the fence more effective for retaining or preventing the entry of animals of different sizes, but also provides a quick fix in case a strand which is electrified should be broken, whereby another strand can then be easily electrified or, alternatively, a plurality of wires with individual fuses can be electrified in parallel whereby a break or short in one wire will not make the fence inoperative for its purposes.

In the Official Action, concerning priority of the invention, it was noted that the Applicant had not filed a certified copy of the PCT Application. The undersigned has been informed by Applicant's counsel in New Zealand that a certified copy of both the PCT Application and the New Zealand Application, which was filed July 14, 1999, are being obtained and will be forwarded to us in the near future whereupon we will submit them separately with a claim of priority for inclusion in the file in the instant Application.

Also the drawings were objected to with the statement that the means for receiving a promotional display must be shown or the feature cancelled from the claims. Accordingly, a new Figure 4 is submitted herewith which shows --promotional display-- on the sleeve. In actuality, it will be appreciated that what is received on the sleeve will not be the words --promotional display-- but will be something else such as, for example, the name of the farm or ranch on which the invention is being used or advertisements of almost any thing as well known in the art. Clearly no new matter is being added.

On page 3, paragraph 4, Applicant was reminded of the proper language and format for an Abstract of the Disclosure. However, no specific criticism was set forth and it is submitted

that the Abstract of the Disclosure as appended on page 6 of the Preliminary Amendment is acceptable.

Claims 19 and 20 were also objected to as being in the improper dependent form for failing further to limit the subject matter of a previous claim. Accordingly, Claims 19 and 20 have been cancelled and replaced by Claims 49 and 50 which, it is submitted, meet the objection set forth in the Official Action.

Claim 10 and Claims 18, 19 (now Claim 49), 20 (now Claim 50), Claims 21-53, Claims 56-62 and 48 (now Claim 52) were rejected on the basis of U.S. Patent No. 4,520,231, which issued May 28, 1985, to Hubbell, under 35 U.S.C. §102. However, Hubbell is directed to a molded safety cap for posts wherein a hollow body received by a fence post having a "T" cross section is integral with a dome shaped cover closing one end. Although it is submitted that the word "sleeve" inherently means that Applicant's sleeve is open at both ends, a paragraph has been inserted on page 8 of the Specification (Substitute Specification) to this effect. Thus Applicant's invention, as claimed, clearly is distinguished over the disclosure of the Hubbell patent which specifically sets forth in column 1, lines 37-40, that the invention provides a safety cap for T-shaped fence post which is shaped so it may be installed over a fence post not easily removed therefrom, and in the preferred embodiment as set forth in column 1, lines 46-49, comprises an elongated generally hollow body having one open end and an integral dome shaped cover closing the other end. It is also stated in column 2, lines 45 and 46, that the cover 8 is integral with the end 10 of the body 4. In column 4, lines 3 and 4, it is stated that the safety cap 2 is integrally molded and comprises a linear low density material. In other words, the Hubbell reference, if anything, leads away from not towards the instant invention which comprises a sleeve which is open at both ends to fit over the fence post. The cap is provided separately and,

as indicated above, the sleeve may be produced by extrusion which is less expensive than molding. In addition, insofar as Claim 52 is concerned (as well as dependent Claim 53), Applicant's invention covers the entire post and thus provides a protection which is certainly not provided for the entire post by the Hubbell reference.

In paragraph 11, page 7 of the Official Action, Claim 24 was rejected under 35 U.S.C. §103 on the basis of the Hubbell reference. Here it is stated that Hubbell does not disclose the sleeve being made of extruded material, but that it would have been well within the level of ordinary skill in the art at the time the invention was made to make the sleeve of an extruded material for cheaper construction costs. It is further stated that the selection of a known material based on its suitability for the intended use is a design consideration within the skill of the art. However, this latter statement is misdirected inasmuch as Hubbell does only not teach producing a sleeve with extruded material, but specifically teaches just the opposite, that is making an integral cap and sleeve which is molded. As indicated above, this is set forth in several places and thus emphasized in the Hubbell reference. Moreover, relative to this rejection under 35 U.S.C. §103, it is a well settled principle that prior patents are references only for what they clearly disclose or suggest and that it is not proper use of a patent as a reference to modify its structure to one which prior art references do not suggest. Still further, when an obviousness rejection is based on a single prior art reference, there must be a substantive showing of a suggestion or modification to modify the teachings of that reference and this is not provided in the Official Action of September 6, 2002.

Reconsideration of Restriction Requirement is respectfully requested. In this connection, it will be appreciated that new Claims 49, 50, 52 and 53 are drawn to the Group II claims of the Restriction Requirement and Claim 51 is drawn to the Group I of the Restriction Requirement.

The statutory requirement for Restriction Requirement is that the claims be directed to independent and distinct inventions. In the Official Action, it is submitted that the distinctions set forth to the effect that the apparatus claims do not require the sleeve to be slipped over the post, just capable of being slipped over and that the sleeve can be formed around the post while still being capable of being slipped over the top of the post are differences which do not meet the requirements of 35 U.S.C. §121 for making a Restriction Requirement and, accordingly, the Restriction Requirement should be withdrawn. Moreover, it will be noted that Claim 48 includes the post, as such, and thus comprises, at least a linking claim, together with Claim 51 wherein the sleeve is forced substantially over the entire exposed surface of the post.

In general, it is submitted that persons desiring to learn of the scope of a patented invention should not be required to review more than one patent and prosecution history to make this needed evaluation. Thus as a matter of public policy, the issuance of multiple patents directed to what is essentially one invention should be avoided.

By the addition of dependent Claim 53, the total number of claims have been increased by one (1). Therefore, an additional fee of \$9.00 appears to be required and our check to cover same is submitted herewith. If in error, the Commissioner of Patents and Trademarks is authorized to debit our credit our Account No. 13-2000, as appropriate.

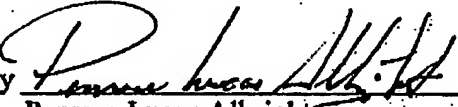
Further consideration and reexamination of this Application, in its amended form, is requested in view of 35 U.S.C. §132 and regulations in implementation thereof. It is submitted the Application in its amended form is free from ambiguity and avoids the references of record. It is further submitted the Examiner should have no difficulty in finding that the differences between the subject matter sought to be patented in this Application and prior art and usage within his expert knowledge are such that the subject matter as a whole would not have been

obvious at the time the invention was made to persons having ordinary skill in the art to which the subject matter of this Application pertains.

In view of the foregoing, the allowance of claims as now presented is earnestly solicited.

Respectfully submitted,

MASON, MASON & ALBRIGHT

By 
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Registration No. 19,082

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Filed: March 6, 2003

4059/12

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MARKED-UP
COPY

Figure 2 shows a side-on cross-sectional view of a preferred embodiment of the present invention attached to a support; and

Figure 3 shows a further embodiment, having two webs; and
Figure 4 illustrates a promotional display on an embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

According to Figure 1 there is shown a plan view of one embodiment of the present invention.

A sleeve 1 is substantially cylindrical, but includes a web 2 formed on the exterior of the cylindrical section. Sleeve 1 is mounted atop a wall 3, and has been slid over a rod 4 which is in turn embedded or otherwise fixably attached to the wall top 3.

It is envisaged that sleeve 1 may be hammered or forced over rod 4 to provide a tight frictional fit.

In order to allow for variable rod diameters, projections 5 are formed on the inside of the sleeve projecting towards the center. These projections 5 may be deformable to a degree, to provide a tight frictional fit between the projections and the rod 4 whilst the deformability allows for variations in rod diameter.

Web 2 includes incisions, indicated by arrow 6 along the length of the web, the incisions configured to receive electric fence wire length 7.

Sleeve 1 is preferably manufactured from an insulating material such as plastic. However, the sleeve will meet the objects of the present invention as long as the web or the web/wire 7 contact point/incisions 6 is electrically insulated.

Sleeve 1 may be manufactured from other insulating materials such as glass, wood, Kevlar and so forth.

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AUG 26 2005

HOWISON & ARNOTT, L.L.P.

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August 26, 2005

CONFIRMATION SENT VIA FIRST CLASS MAIL

YES ___ NO X___NUMBER OF PAGES TO FOLLOW 4**FACSIMILE COVER SHEET**

DATE: August 26, 2005
TO: Joseph P. Hirl (2121)
COMPANY: U. S. Patent and Trademark Office
FAX NUMBER: Centralized fax number: (571) 273-8300
FROM: Howison & Arnott, L.L.P. (Gregory Howison)
SERIAL NO.: 09/662,243
OUR FILE : PAVI-25,461
ATTACHED: Response to the Notice of Drawing Inconsistency with
Specification (2);

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COMMENT:

PTO/SB/21 (09-04)

Approved for use through 07/31/2008. OMB 0851-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/882,243
	Filing Date	September 14, 2000
	First Named Inventor	Eric J. Hartman et al.
	Art Unit	2121
	Examiner Name	Joseph P. Hirl
	Attorney Docket Number	PAVI-25,481
Total Number of Pages in This Submission		

ENCLOSURES (Check all that apply)														
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/Declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Response to the Notice of Drawing Inconsistency with Specification												
Remarks														
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT <table border="1"> <tr> <td>Firm Name</td> <td colspan="2">Howison & Arnott, L.P.</td> </tr> <tr> <td>Signature</td> <td colspan="2"></td> </tr> <tr> <td>Printed name</td> <td colspan="2">Gregory M. Howison</td> </tr> <tr> <td>Date</td> <td>8/26/05</td> <td>Reg. No. 30,646</td> </tr> </table>			Firm Name	Howison & Arnott, L.P.		Signature			Printed name	Gregory M. Howison		Date	8/26/05	Reg. No. 30,646
Firm Name	Howison & Arnott, L.P.													
Signature														
Printed name	Gregory M. Howison													
Date	8/26/05	Reg. No. 30,646												

CERTIFICATE OF TRANSMISSION/MAILING	
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:	
Signature	
Typed or printed name	Gregory M. Howison
Date	8/26/05

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PAVI-25,461

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eric J. Hartman, Stephen Piche and Mark Gerules

Serial No.: 09/662,243

Filed: September 14, 2000

Group: 2121

Examiner: Joseph P. Hirl

For: METHOD AND APPARATUS FOR TRAINING A SYSTEM MODEL WITH
GAIN CONSTRAINTSRECEIVED
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AUG 26 2005

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

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8/26/05
(Date of Deposit)Gregory M. Howison
(Name of Person Mailing Document)

(Signature)

8/26/05
(Date of Signature)**RESPONSE TO THE NOTICE OF DRAWING
INCONSISTENCY WITH SPECIFICATION**

In response to the Notice of Drawing Inconsistency with Specification dated August 12, 2005, please amend the Specification, under the paragraph Brief Description of the Drawings as follows:

Amendments to the Specification begin on page 2 of this paper.

Remarks/Arguments begin on page 3 of this paper.

AMENDMENT AND RESPONSE
S/N 09/662,243
Atty. Dkt. No. PAVI-25,461

Amendments to the Specification:

Please replace paragraph under **BRIEF DESCRIPTION OF THE DRAWINGS** with the following amended paragraph;

For a more complete understanding of the present invention and the advantages thereof, reference is now made to the following description taken in conjunction with the accompanying Drawings in which:

FIGURE 1 illustrates a prior art Hammerstein model;

FIGURE 2 illustrates a block diagram of a modeling technique utilizing steady-state gain to define the gain of the dynamic model;

FIGURE 3a-3d illustrate timing diagrams for the various outputs of the system of FIGURE 2;

FIGURE 4 illustrates a detailed block diagram of a dynamic model;

FIGURE 5 illustrates a block diagram of the operation of the model of FIGURE 4;

FIGURE 6 illustrates an example of the modeling technique of the embodiment of FIGURE 2 utilized in a control environment;

FIGURE 7 illustrates a diagrammatic view of a change between two steady-state values;

FIGURE 8 illustrates a diagrammatic view of the approximation algorithm for changes in the steady-state value;

FIGURE 9 illustrates a block diagram of the dynamic model;

FIGURE 10 illustrates a detail of the control network utilizing an error constraining algorithm;

FIGURES 11a and 11b illustrate plots of the input and output during optimization;

FIGURE 12 illustrates a plot depicting desired and predicted behavior;

FIGURE 13 illustrates various plots for controlling a system to force the predicted behavior to the desired behavior;

FIGURE 14 illustrates a plot of a trajectory weighting algorithm;

FIGURE 15 illustrates a plot for one type of constraining algorithm;

FIGURE 16 illustrates a plot of the error algorithm as a function of time;

AMENDMENT AND RESPONSE

S/N 09/662,243

Atty. Dkt. No. PAVI-25,461

FIGURE 17 illustrates a flowchart depicting the statistical method for generating the filter and defining the end point for the constraining algorithm of FIGURE 15;

FIGURE 18 illustrates a diagrammatic view of the optimization process;

FIGURE 18a illustrates a diagrammatic representation of the manner in which the path between steady-state values is mapped through the input and output space;

FIGURE 19 illustrates a flowchart for the optimization procedure;

FIGURE 20 illustrates a diagrammatic view of the input space and the error associated therewith;

FIGURE 21 illustrates a diagrammatic view of the confidence factor in the input space;

FIGURE 22 illustrates a block diagram of the method for utilizing a combination of a non-linear system and a first principals system;

FIGURE 23 illustrates an alternate embodiment of the embodiment of FIGURE 22;

FIGURE 24 illustrates a plot of a pair of data with a defined delay associated therewith;

FIGURE 25 illustrates a diagrammatic view of the binning method for determining statistical independence;

FIGURE 26 illustrates a block diagram of a training method wherein delay is determined by statistical analysis;

FIGURE 27 illustrates a flow chart of the method for determining delays based upon statistical methods;

FIGURES 27a -27c illustrate plots of the best input variable selection process;

FIGURE 27d illustrates a scatterplot of dots that represent data of pH versus acid for a stirred-tank reactor;

FIGURE 27e illustrates a screen that allows the modeler to specify, for each pair of input-output variables, gain constraints;

FIGURE 27f illustrates a screen wherein the modeler can select input-output cells;

FIGURE 27g illustrates the Gain Constraints Monitor viewable during and after training a gain-constrained model;

FIGURE 27h illustrates a plot of gain constraints;

FIGURE 28 illustrates a prior art Weiner model;

FIGURE 29 illustrates a block diagram of a training method utilizing the system dynamics;

AMENDMENT AND RESPONSE

S/N 09/662,243

Atty. Dkt. No. PAVI-25,461

FIGURE 30 illustrates plots of input data, actual output data, and the filtered input data which has the plant dynamics impressed thereupon;

FIGURE 31 illustrates a flow chart for the training operation;

FIGURE 32 illustrates a diagrammatic view of the step test;

FIGURE 33 illustrates a diagrammatic view of a single step for $u(t)$ and $\bar{u}(t)$;

FIGURE 34 illustrates a diagrammatic view of the pre-filter operation during training;

FIGURE 35 illustrates a diagrammatic view of a MIMO implementation of the training method of the present disclosure; and

FIGURE 36 illustrates a non-fully connected network;

FIGURE 37 illustrates a graphical user interface for selecting ranges of values for the dynamic inputs in order to train the dynamic model;

FIGURE 38 illustrates a flowchart depicting the selection of data and training of the model;

FIGURES 39 and 40 illustrate graphical user interfaces for depicting both the actual historical response and the predictive response;

FIGURE 41 illustrates a block diagram of a predictive control system with a GUI interface;

FIGURES 41-45 illustrate screen views for changing the number of variables that can be displayed from a given set;

FIGURE 46 illustrates a diagrammatic view of a plant utilizing on-line optimization;

FIGURE 47 illustrates a block diagram of the optimizer;

FIGURE 48 illustrates a plot of manipulatable variables and controlled variables or outputs;

FIGURES 49-51 illustrate plots of the dynamic operation of the system and the bias;

FIGURE 52 illustrates a block diagram of a prior art optimizer utilizing steady-state;

FIGURE 53 illustrates a diagrammatic view for determining the computed disturbance variables;

FIGURE 54 illustrates a block diagram for a steady state model utilizing the computer disturbance variables;

FIGURE 55 illustrates an overall block diagram of an optimization circuit utilizing computed disturbance variables;

FIGURE 56 illustrates a diagrammatic view of furnace/boiler system which has associated therewith multiple levels of coal firing;

AMENDMENT AND RESPONSE

S/N 09/662,243

Atty. Dkt. No. PAVI-25,461

5

FIGURE 57 illustrates a supply top sectional view of the tangentially fired furnace;

FIGURE 58 illustrates a block diagram of one application of the on-line optimizer;

FIGURE 59 illustrates a block diagram of training algorithm for training a model using a multiple to single MV algorithm; and

5 FIGURES 60 and 61 illustrate more detailed block diagrams of the embodiment of FIGURE 57.

AMENDMENT AND RESPONSE

S/N 09/662,243

Atty. Dkt. No. PAVI-25,461

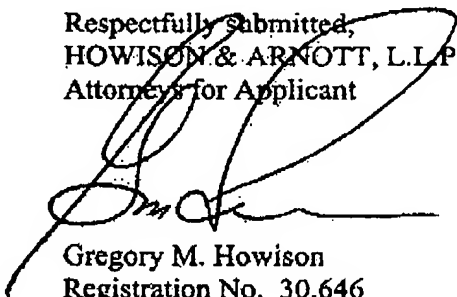
6

REMARKS

Applicant carefully reviewed the Office Action dated August 12, 2005. Applicants have amended the Specification, Brief Description of the Drawings adding Fig. 27F. Reconsideration and favorable action is respectfully requested.

Applicants have now made an earnest attempt in order to place this case in condition for allowance. For the reasons stated above, Applicants respectfully request full allowance of this case. Please charge any additional fees or deficiencies in fees or credit any overpayment to Deposit Account No. 20-0780/PAVI-25,461 of HOWISON & ARNOTT, L.L.P.

Respectfully Submitted,
HOWISON & ARNOTT, L.L.P.
Attorneys for Applicant



Gregory M. Howison
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August 23, 2005

AMENDMENT AND RESPONSE
S/N 09/662,243
Atty. Dkt. No. PAVI-25,461

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- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
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